**Mini-quiz #13 Chemistry 1114 Wednesday 2 October 2013 A**

**6 pts**

**Your name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Warm-up problem with eggs: (1 dozen =12 eggs)

A dozen eggs weighs 750 grams. How many eggs are present if you have 9000 grams of eggs?

**9000 g \* 1 dozen/750 g = 12 dozen =12 \*12 eggs =144**

9000 grams of eggs= \_144\_\_\_\_eggs 1 pt

1. Use the Periodic Table on the back of this quiz to compute the molecular weight (MW) of crystal meth

whose molecular formula is C10H15N. (Round answer to the nearest gram/mol)

10\*12+15\*1+14=149 g/mol

MW of C10H15N (crystal meth)=\_\_\_\_149\_\_\_\_\_\_\_ g/mole 1 pt

(Round to nearest g/mol)

1. You are holding 44.7 kilos (44,700 grams) of crystal meth ‘for a friend’. How many moles do you have in your possession ?

Divide up” 44,700 g = 300 moles

149 g/mol

Moles of C10H15N (crystal meth) in 44,700 g=\_\_300\_\_\_\_\_\_ 2 pts

1. How many molecules of meth are you holding for your `friend’ ? (1 mole ~ 6.02\*1023 molecules)

“multiply down” 300 mols \* 6.02\*1023 molecules/mole=1.806\*1026 ~1.8\*1026 molecules

Molecules of meth in 44,700 g meth= \_1.8\*1026\_\_\_\_\_ 2 pts

**Mini-quiz #13 Chemistry 1114 Wednesday 2 October 2013 B**

**6 pts**

**Your name:\_\_\_\_\_\_\_\_answers\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Warm-up problem with eggs: (1 dozen =12 eggs)

A dozen eggs weighs 800 grams. How many eggs are present if you have 7200 grams of eggs?

**7200 g = 9 dozen = 9\*12=108 eggs**

800 g/dozen 7200 grams of eggs= \_\_108\_\_\_\_\_\_\_eggs 1 pt

1. Use the Periodic Table on the back of this quiz to compute the molecular weight (MW) of THC

(active ingredient in marijuana) whose molecular formula is C21H30O2. (Round answer to the nearest gram/mol)

21\*12 + 30\*1+2\*16=314 g/mol

MW of C21H30O2 (THC)=\_\_\_314\_\_\_\_\_\_\_\_\_\_ g/mole 1 pt

(Round to nearest g/mol)

1. You are holding 7.85 kilos (7850 grams) of pure THC ‘for a friend’. How many moles do you have in your possession ?

“divide up” 7850 g = 25 moles

314 g/mole

Moles of pure THC in 7,850 g of THC= \_\_\_25\_\_\_\_\_\_\_\_ moles 2 pts

1. How many molecules of THC are you holding for your `friend’ ? (1 mole ~ 6.02\*1023 molecules)

“multiply down” 25 mol \*6.02\*1023 molecules/mol =1.505\*1025 ~ 1.5\*1025

Molecules of THC in 7850 g THC= \_\_1.5\*1025\_\_ 2 pts